

AMENDMENTS TO THE CLAIMS:

The listing of claims below will replace all prior versions, and the listings of claims in the application:

1. (original) Catalyst-containing gas diffusion layer for a fuel cell, which comprises a porous support material and catalyst particles which are distributed uniformly over the entire volume of the gas diffusion layer.
2. (original) Catalyst-containing gas diffusion layer according to Claim 1, wherein the catalyst particles are immobilized on the surface of the porous support material.
3. (currently amended) Catalyst-containing gas diffusion layer according to Claim 1 or 2, wherein the catalyst particles have a mean particle size of from 1 to 100 nm.
4. (currently amended) Catalyst-containing gas diffusion layer according to Claim 1 ~~any of the preceding claims~~, wherein the catalyst particles comprise a noble metal selected metals from the group consisting of Pt, Pd, Ru, Rh, Au, Ag, Ir, and Os, ~~and/or oxides thereof, and/or mixtures or alloys thereof with base metals or an~~ oxide thereof, or a mixture thereof, or an alloy thereof with a base metal.
5. (currently amended) Catalyst-containing gas diffusion layer according to Claim 1 ~~any of the preceding claims~~, wherein the catalyst particles are present on the gas diffusion layer in a concentration per unit area of from 0.01 to 100 mg of metal/cm².

6. (currently amended) Catalyst-containing gas diffusion layer according to Claim 1 ~~any of the preceding claims~~, wherein the porous support material comprises woven carbon fibre fabric, carbon fibre nonwoven, carbon paper, carbon fibre mesh, synthetic fibre mesh coated with conductive material, woven polymer fibre fabric coated with conductive material, glass fibres coated with conductive material, foam coated with conductive material or woven metal fibre fabric or metal wire mesh.
7. (currently amended) Catalyst-coated gas diffusion layer according to Claim 1 ~~any of the preceding claims~~, wherein the catalyst particles are gas-phase-active and are suitable for the oxidation of carbon monoxide.
8. (currently amended) Catalyst-containing gas diffusion layer according to Claim 1 ~~any of the preceding claims~~, wherein the catalyst particles are gas-phase-active and are suitable for the conversion of carbon monoxide into methane.
9. (currently amended) Catalyst-containing gas diffusion layer according to Claim 1 ~~any of the preceding claims~~, wherein the catalyst particles are suitable for the oxidation of methanol.
10. (currently amended) Process for producing a catalyst-containing gas diffusion layer according to Claim 1 ~~any of Claims 1 to 9~~, wherein the catalyst particles are formed on the porous support material by thermal decomposition of at least one precursor compound.

11. (original) Process for producing a catalyst-containing gas diffusion layer according to Claim 10, wherein the porous support material is treated with at least one precursor compound, is dried and is heat treated, with decomposition of the precursor compound occurring and the catalyst particles being formed and immobilized on the surface of the support material.
12. (currently amended) Process for producing a catalyst-containing gas diffusion layer according to Claim 10 ~~or 11~~, wherein a thermally decomposable metal compounds ~~are~~ is used as a precursor compounds.
13. (currently amended) Process for producing a catalyst-containing gas diffusion layer according to Claim 10 ~~any of Claims 10 to 12~~, wherein one or more metal compounds selected from the group consisting of nitrates, carbonates, carboxylates, hydroxycarboxylates, acetates, lactates, butanoates, oxalates, formates, resinsates and ethylhexanoates are used as precursor compound.
14. (currently amended) Process for producing a catalyst-containing gas diffusion layer according to Claim 10 ~~any of Claims 10 to 13~~, wherein the thermal decomposition comprises heat treatment which is carried out at a temperature of from 200 to 900°C.

15. (currently amended) Process for producing a catalyst-containing gas diffusion layer according to Claim 10 ~~any of Claims 10 to 14~~, wherein the thermal decomposition comprises heat treatment which is carried out under a gaseous atmosphere, preferably under air, nitrogen, hydrogen or mixtures thereof.
16. (original) Process for producing a catalyst-containing gas diffusion layer according to Claim 10, wherein the production is carried out in a continuous process.
17. (currently amended) ~~Use of a catalyst-containing gas diffusion layer according to any of Claims 1 to 9 in fuel cells~~ A fuel cell for the removal of carbon monoxide from hydrogen-containing fuel gases comprising the catalyst-containing gas diffusion layer of Claim 1.
18. (currently amended) ~~Use of a catalyst-containing gas diffusion layer according to any of Claims 1 to 9 in~~ A direct methanol fuel cell ~~cells~~ for the oxidation of methanol comprising the catalyst-containing gas diffusion layer of Claim 1.
19. (currently amended) Membrane-electrode unit for a low-temperature fuel cell, which comprises a catalyst-containing gas diffusion layer according to Claim 1 ~~any of Claims 1 to 9.~~